

U.S. Application No. 10/023,916 – Filed: December 17, 2001  
Amendment Dated: November 17, 2003  
Reply to Office Action Dated: July 7, 2003

### **REMARKS/ARGUMENTS**

In the Office Action dated July 7, 2003, the Examiner has rejected Claims 1-17 under 35 U.S.C. §103(a). By this paper Claims 1 and 3 have been amended to more particularly point out and distinctly claim that which Applicants regard as the invention. Claim 2 has been cancelled without prejudice. For the following reasons Claims 1 and 3-17, as now amended, are respectfully considered to be patentable over the prior art.

Claims 1 and 3-17 have been rejected under 35 U.S.C. §103(a) as unpatentable over Theodoulou, et al. in view of Berkes, et al. The Theodoulou, et al. in view of Berkes, et al. patents are directed respectively to flash fusing. While it is admitted *arguendo* that flash fusing is shown in the prior art references, neither reference describes or suggests that the toner to be fused has a sharp transition from solid to liquid state as disclosed and claimed as Applicants' invention. As now amended, independent Claim 1 recites a toner where the ratio of the value of elastic modulus  $G'$  at the reference temperature calculated from the initial temperature at the beginning of the glass transition of the toner plus 50°C to the value of the elastic modulus at the initial temperature being less than  $10^{-7}$ , whereby the toner has a sharp transition from its solid to liquid state. The Examiner has relied upon Berkes, et al. as showing toner resins that have "a sharp transition from solid to liquid". However, as clearly set forth in line 28 of Column 4 of Berkes et al., the identified resins have viscosities in the range of approximately  $10^3$  poise at 130°C. With the resins of the now specifically claimed elastic modulus, the viscosity would be only about 100 poise at 120°C, a difference of a factor of 10. Therefore, it is respectfully submitted that neither Berkes et al., nor any other known prior art teaches the use of toner in the range now specifically claimed. That is, neither reference, individually or in any proper combination, now can be said to suggest providing a toner which has a sharp transition from solid to liquid state, to facilitate providing a toner which can be advantageously flash fused by pulsed radiation, as specifically recited as Applicants' invention in the rejected claims. Therefore, even if the references are combinable in the manner proposed by the Examiner to suggest a toner having certain physical properties to be useful in flash fusing, such combination would provide no reasonable basis for teaching a toner which has a sharp transition from solid to liquid

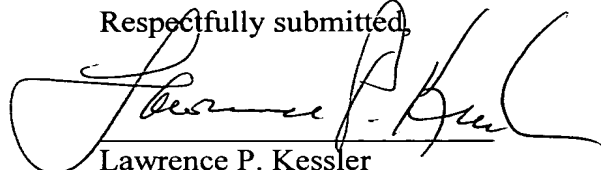
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state, to facilitate fixing by pulsed radiation, to one of ordinary skill in the art.  
Accordingly, it is respectfully submitted that Claims 1 and 3-17 patentably distinguish over the references as presented by the Examiner, and such claims should now be allowed.

Applicants are not aware of any additional patents, publications, or other information not previously submitted to the Patent and Trademark Office which would be required under 37 C.F.R. §1.99.

As now presented, this application is believed to be in condition for favorable reconsideration and early allowance, and such actions are respectfully requested.

Respectfully submitted,



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